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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,161	03/10/2006	Mark Jozef Albert Waer	50571/005001	3570

21559 7590 12/29/2008

CLARK & ELBING LLP
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EXAMINER	
HUGHES, ALICIA R	
ART UNIT	PAPER NUMBER
1614	

NOTIFICATION DATE	DELIVERY MODE
12/29/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentadministrator@clarkelbing.com

Office Action Summary	Application No.	Applicant(s)	
	10/595,161	WAER ET AL.	
	Examiner	Art Unit	
	Alicia R. Hughes	1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 August 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of the Claims and Examination

Claims 8-27 are pending and the subject of this Office Action.

Applicant's arguments filed on 21 August 2008 in response to the non-final rejection filed by this Office on 12 February 2008 have been fully considered, but they are not deemed to be persuasive.

Rejections not reiterated from previous office actions are hereby withdrawn. The following rejections are reiterated and arguments newly applied, and they constitute the complete set of rejections being applied to the instant application presently.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re*

Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 8-27 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 31 of U.S. Patent Application No. 10-557,541. Although the conflicting claims are not identical, they are not patentably distinct from each other because the '541 patent application, like the instant invention, is drawn to a method of treating or preventing a pathologic disease or disorder. The methods articulated in claim 31 of the '541 application overlap in scope with the methods articulated in claims 8-27 of the instant invention, because both utilize compounds with an identical core structure to treat the same family of disease, cachexia in one instant, which is a known effect of cancer and a cell proliferative disorder, of which cancer is known to be one.

This is a provisional rejection, because the claims have not, in fact, been patented.

In looking in continuity data, it is noted that applicant has numerous pending applications encompassing the same or similar subject matter of the instant application. Applicant should

review all subject matter considered the same or similar, and submit the appropriate Terminal Disclaimer(s). For example, pending patent applications with the same or similar subject matter include, but are not limited to 10/595,126 and 11/402423.

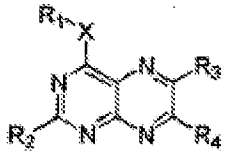
Claim Rejections – 35 U.S.C. §102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 8-27 are rejected under 35 U.S.C. §102(a) and §102(e) as being anticipated clearly by U.S. Patent Publication No. 2004/0077859 A1 [hereinafter referred to as "Waer et al"](Please consider the reference in its entirety).

Waer et al disclose novel pteridine compounds, with the core structure of



wherein X can represent an oxygen atom or a group with the formula NZ; Z is a group independently defined as R1 or Z is hydrogen or the group NZ together with R1 is either hydroxylamino or an optionally substituted heterocyclic group containing at least one nitrogen

atom; R3 together with R4 forms a homocyclic or heterocyclic radical (Pages 4 to 5, para. 23); and R4 can be hydrogen, halogen, etc (Page 3, para. 22).

Waer et al also teach pharmaceutically acceptable addition salts stereoisomers and dihydro or tetrahydropterdine derivates of the above structure (Page 5, para. 24). These compounds can be used to treat or prevent hepatitis B-, C-, and D- (Page 18, paras 149-153 and 155). A specific example of a compound representative of the above formula is 2-amino-4-piperazino-6-(4-methoxyphenyl) pteridine (Page 22, para. 218).

The Applicants argue that the disorders taught by the instant invention are absent from the specification in Waer et al, because viral hepatitis is distinct from alcohol-induced hepatis as noted in the instant invention. This argument is not a persuasive one in that it is the symptoms of hepatitis rather than the underlying cause that is sought to be treated. Therefore, the teachings of treating and/or preventing hepatitis as noted in Waer et al is clearly germane to the instant invention.

In view of the foregoing, claims 8-27 are clearly anticipated by Waer et al.

Claim Rejections – 35 U.S.C. §103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

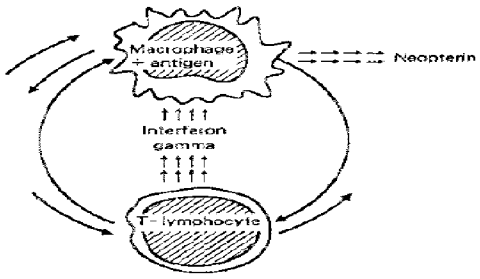
claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

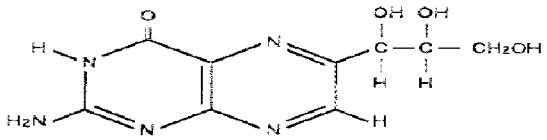
Claims 8-27 are rejected under 35 U.S.C. 103(a) as being obvious over Iwagaki, H., et al, "Decreased Serum Tryptophan In Patients With Cancer Cachexia Correlates With Increased Serum Neopterin," *Immunological Investigations*, Vol. 24, Issue 3, pages 467-478 (1995)[Iwagaki, et al"].

The Applicants argue that Iwagaki teaches away from the administration of pterdine compounds for the treatment of cachexia, because it does not teach of suggest that NPT could be useful for the treatment of cachexia and that Brown does not remedy this deficiency, because it does not teach any of the pterdine compounds of the instant invention.

Iwagaki et al disclose the following chemical structure for neopterin

TRP IN PATIENTS WITH CANCER CACHEXIA 469



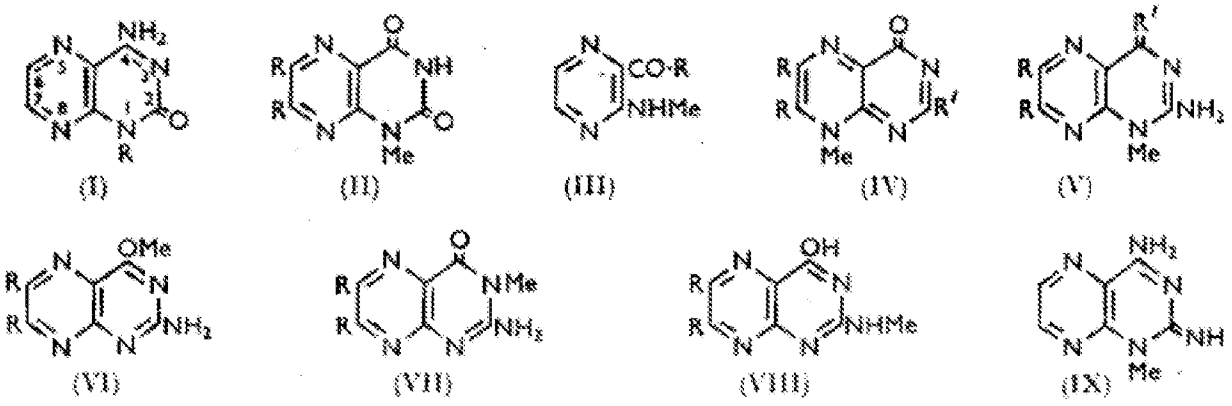


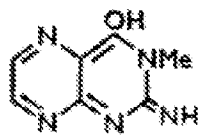
[chemical structure of neopterin]

and teaches that neopterin [hereinafter referred to as "NPT"] comes from activated macrophages that are activated by tumor-sensitized T cells via gamma interferon (IFN-γ) (See Abstract; Page 468, lines 14-20) and that NPT is released from cells based on the interaction of T-cells and

macrophages (Page 469, Figure 2). Iwagaki et al also teach that an increase in NPT production and presence in tumor cells is indicative of cancer cachexia (Page 468, lines 20-26; Page 471, lines 1-3; Page 473, lines 7-13), and that presence of NPT has an inverse relationship with the presence of tryptophan (Page 473, lines 7-13). Thus, an increase in the levels of tryptophan would reflect a decrease in the levels of NPT, thereby effectively treating and potentially preventing cachexia. (Page 476, Figure 5 and text thereafter).

NPT is an obvious variation of the core structure of the instant invention, differing mainly by the functional group attached NPT's position one and the position of the oxygen substituent at position four rather than, for example, a methyl ether, as contemplated by the instant invention. Based on the examples below, as disclosed in Brown, D.J., et al, "Pterdine Studies. Part XIV. Methylation of 2-Amino-4-hydroxypterdine and Related Compounds," *J. Amer. Chem. Soc.*, Vol. 869, pages 4413-4420 (1961), as early as 1961 this core structure was known and with varying substitutions, such as oxygen, hydroxyl, methyl, amines, and methyl





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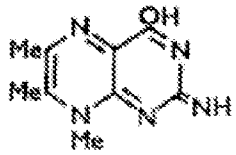

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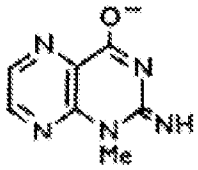

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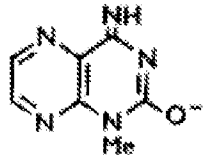

(XIII)

ether, at various positions on the ring in question. For example, structure 12 above shows the core structure with a reactive oxygen site for which the methyl group could easily attach to stabilize the compound, which would yield the compound of the instant invention. The suggestion therefore, is that these reactive sites are not necessarily critical for to functionality of the compound as a whole.

For the reasons stated herein, the Office respectfully disagrees with the position taken by Applicant that the Iwagaki teaches away from the instant invention and Brown does not cure the deficiencies therein.

In light of the foregoing, it would have been *prima facie* obvious to one of ordinary skill modify the teachings of Iwagaki et al by substituting the compound of the instant invention and concluding that the same would be useful in the treatment of cachexia.

Conclusion

No claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Hughes whose telephone number is 571-272-6026. The examiner can normally be reached from 9:00 A.M. until 5:00 P.M. on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel, can be reached at 571-272-0718. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR of Public PAIR. Status information for unpublished applications is available through Public PAIR only. For information about the PAIR system, see http://pair-direct-uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alicia R. Hughes/
Primary Examiner, Art Unit 1614

/Raymond J Henley III/
Examiner, Art Unit 1614